

Figure 1. Typical output pyrogram from instrument performing open-system temperature programmed pyrolysis (Jones and Tobey, 1997).

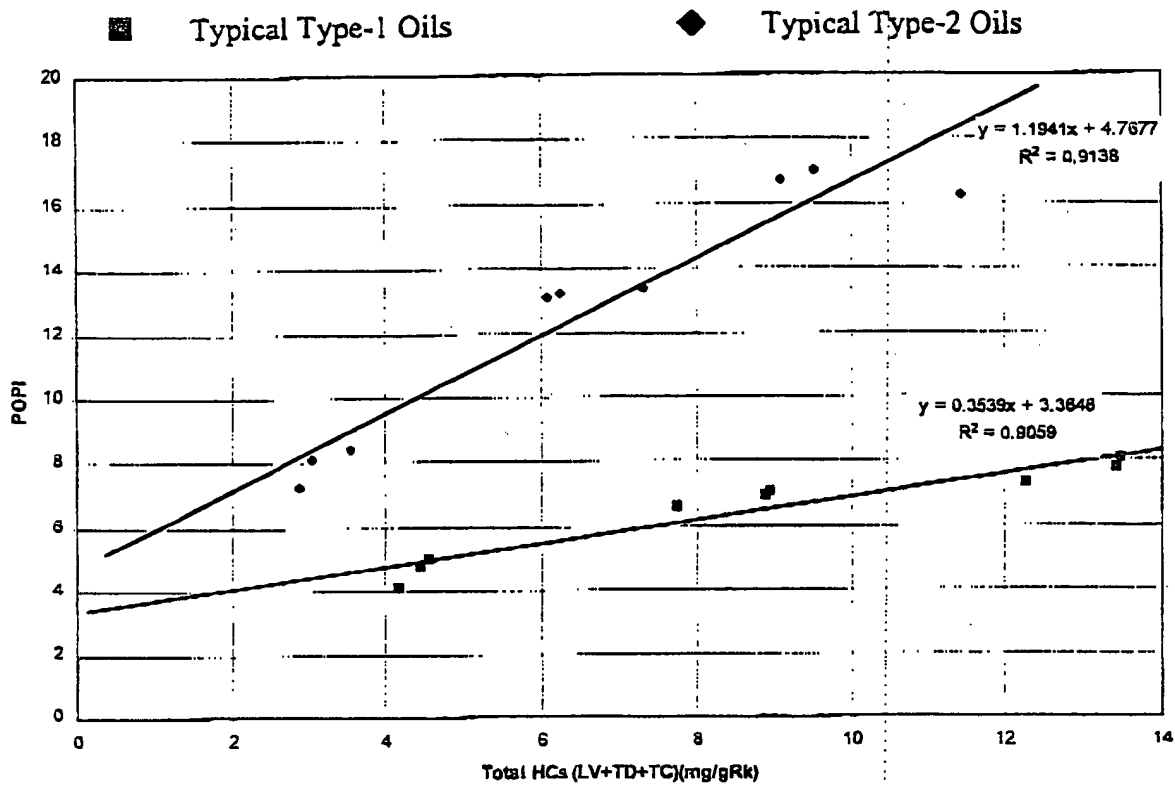
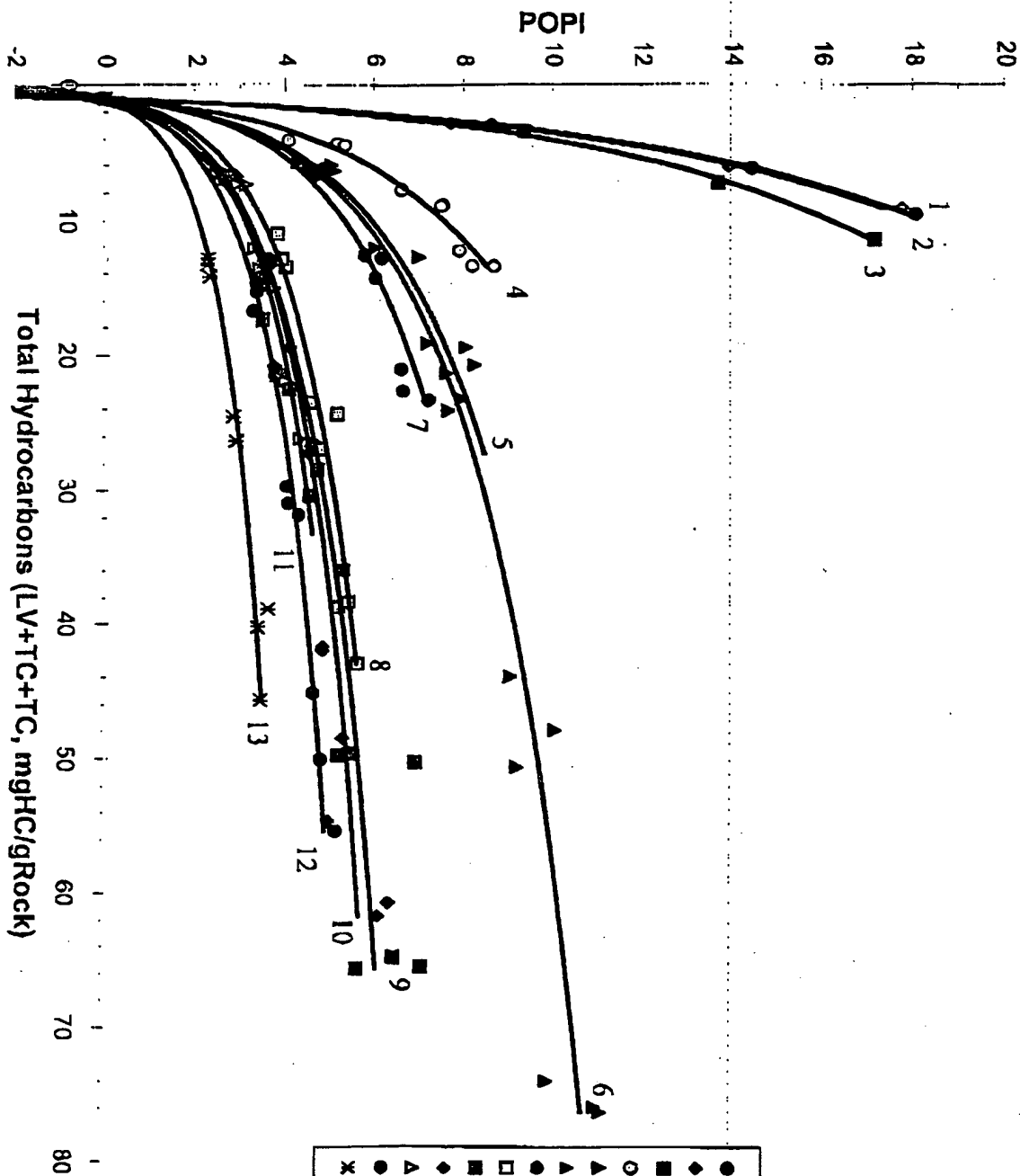


Figure 2. Cross plot of POPI versus Total Hydrocarbons (LV+TD+TC) showing linear interpolations to determine POPI₀ for two different oils from Jones and Tobey, 1997.



● Oil-1	$POPI = 7.99 \ln(x) - 0.0971$
◆ Oil-2	$POPI = 7.99 \ln(x) - 0.2684$
■ Oil-3	$POPI = 6.97 \ln(x) + 0.1478$
○ Oil-4	$POPI = 3.27 \ln(x) + 0.0447$
▲ Oil-5	$POPI = 2.54 \ln(x) + 0.1116$
△ Oil-6	$POPI = 2.47 \ln(x) + 0.0949$
● Oil-7	$POPI = 2.16 \ln(x) + 0.3627$
□ Oil-8	$POPI = 1.48 \ln(x) + 0.1100$
■ Oil-9	$POPI = 1.58 \ln(x) - 0.4631$
◆ Oil-10	$POPI = 1.40 \ln(x) - 0.0071$
△ Oil-11	$POPI = 1.28 \ln(x) + 0.165$
● Oil-12	$POPI = 1.25 \ln(x) - 0.0565$
× Oil-13	$POPI = 0.94 \ln(x) - 0.0715$

Figure 3. POPI versus Total Hydrocarbons (LV+TD+TC) for a suite of oils with substantially different pyrolytic character.

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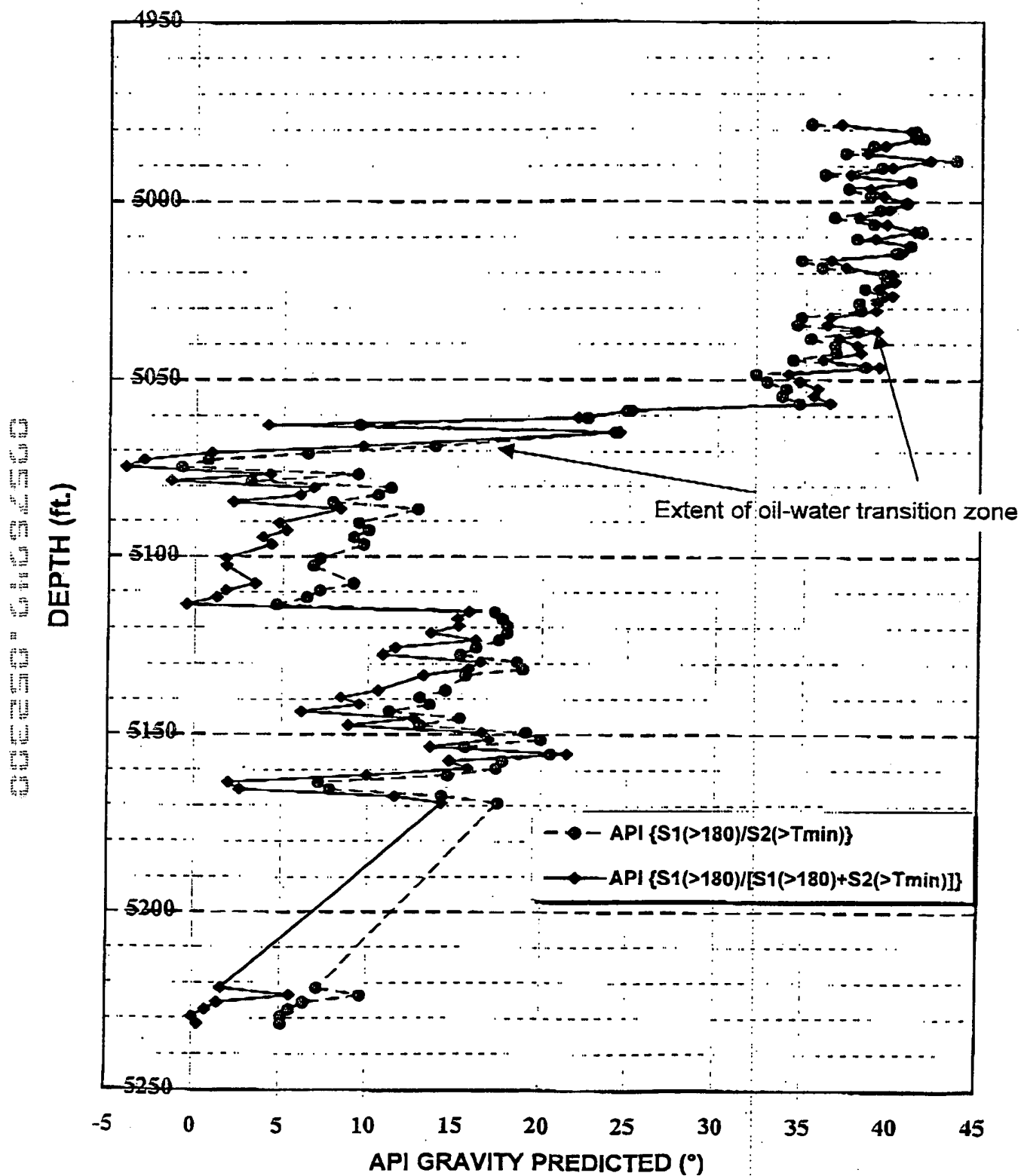


Figure 4: Plot of predicted API gravity determined from Rock-Eval ratios on individual core samples.

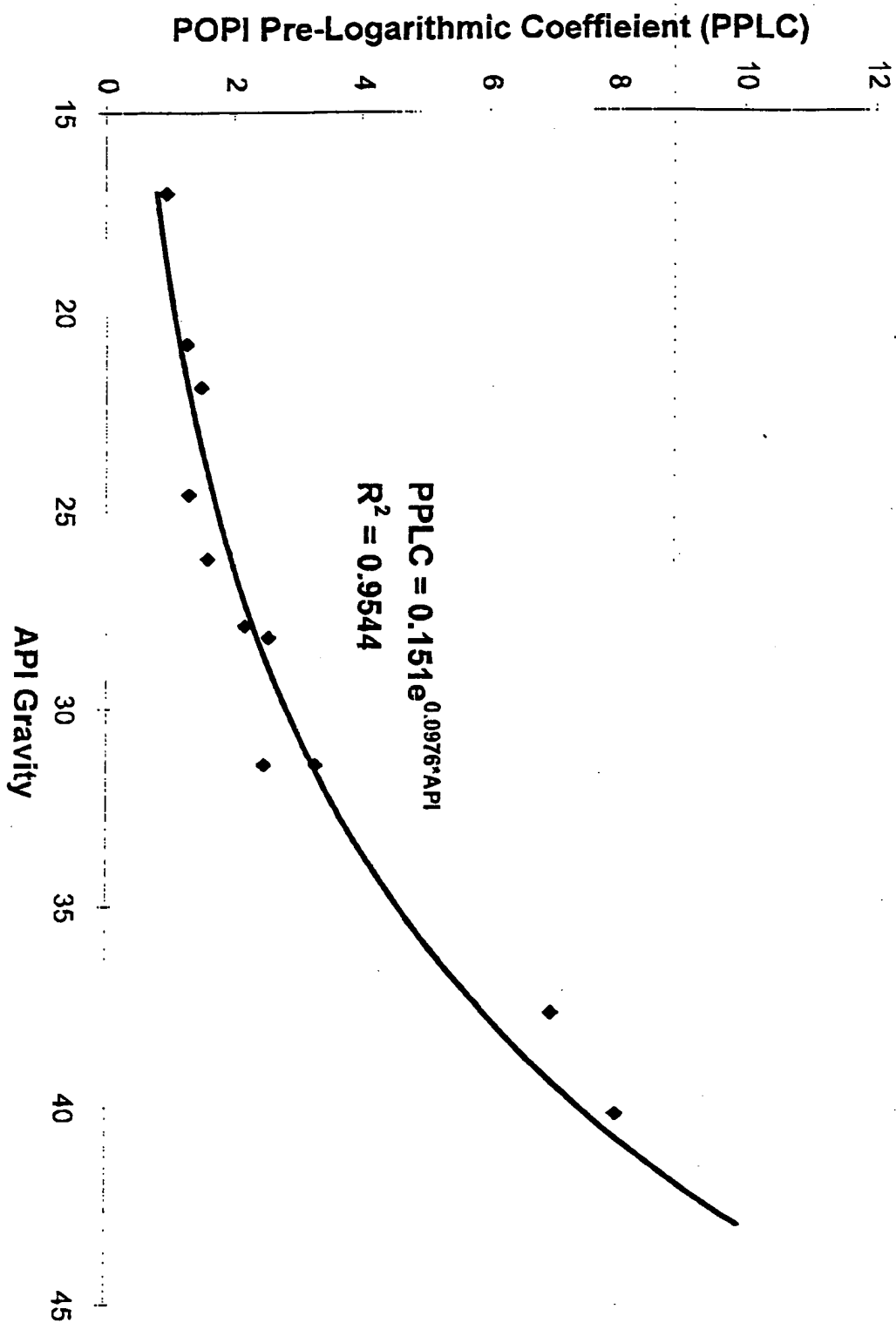


Figure 5. POPI Pre-Logarithmic Coefficient versus API Gravity for oils from Figure 3.

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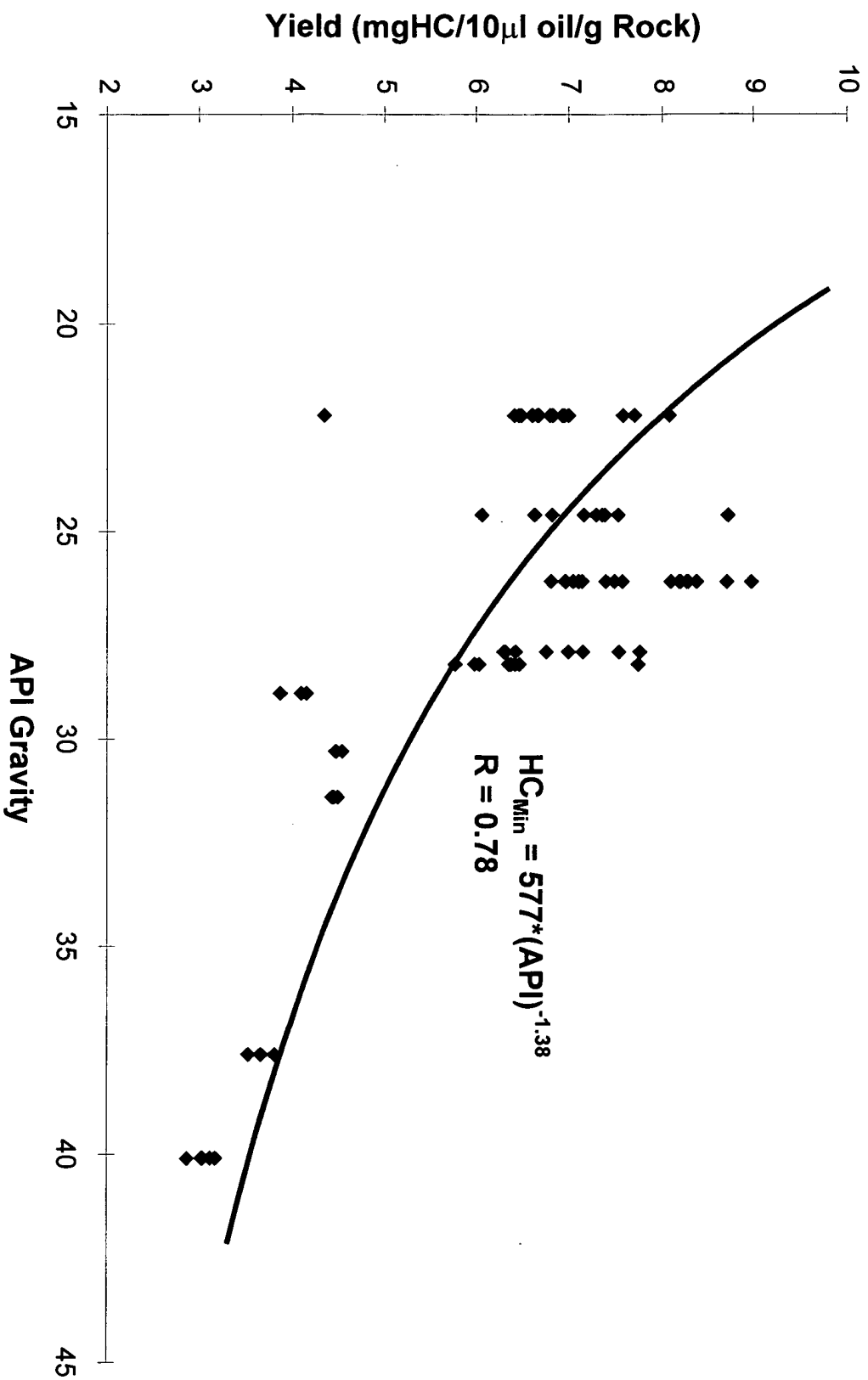


Figure 6. Pyrolytic yield (mgHC/10µl oil/g Rock) versus API gravity (°).

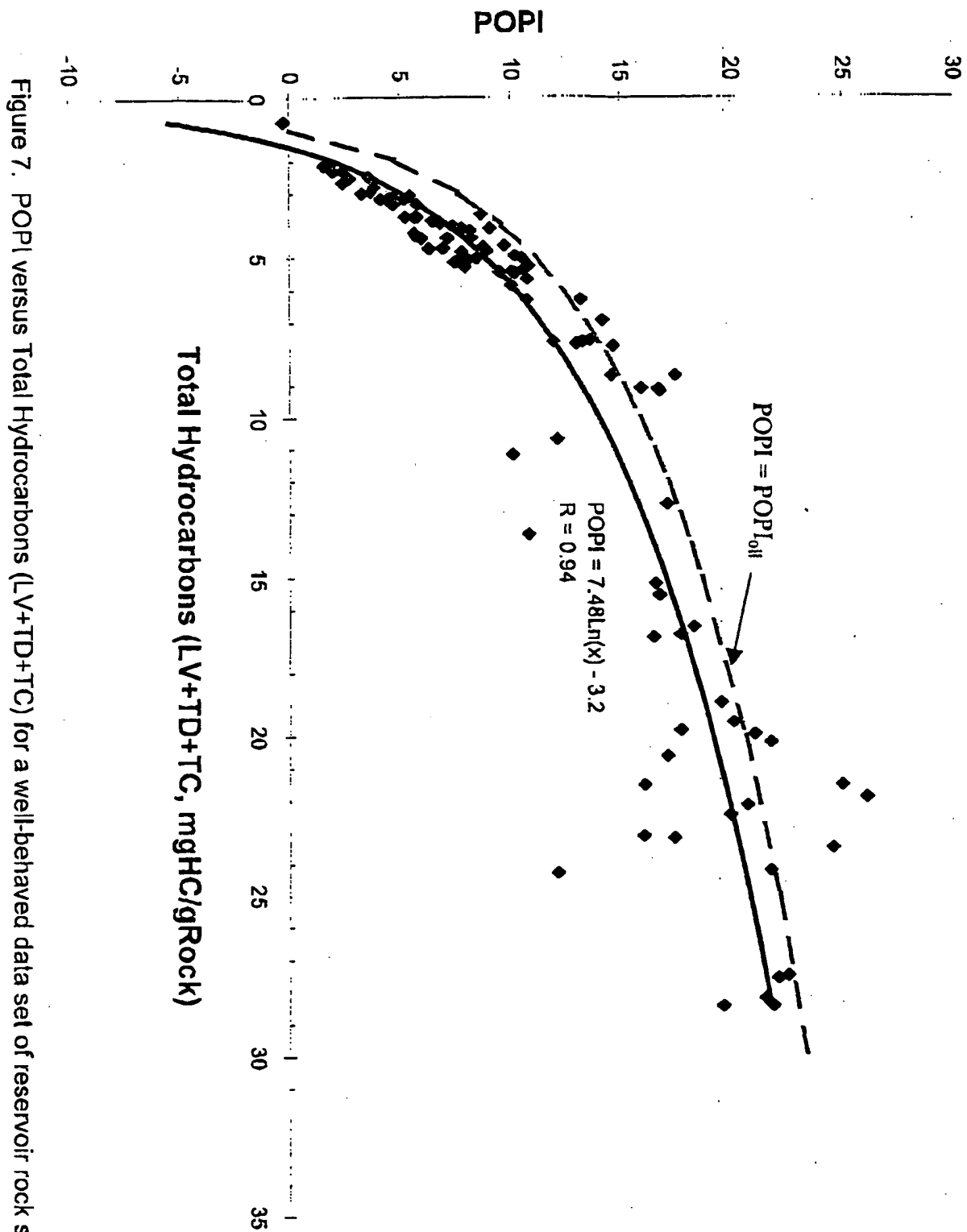


Figure 7. POPi versus Total Hydrocarbons (LV+TD+TC) for a well-behaved data set of reservoir rock samples.

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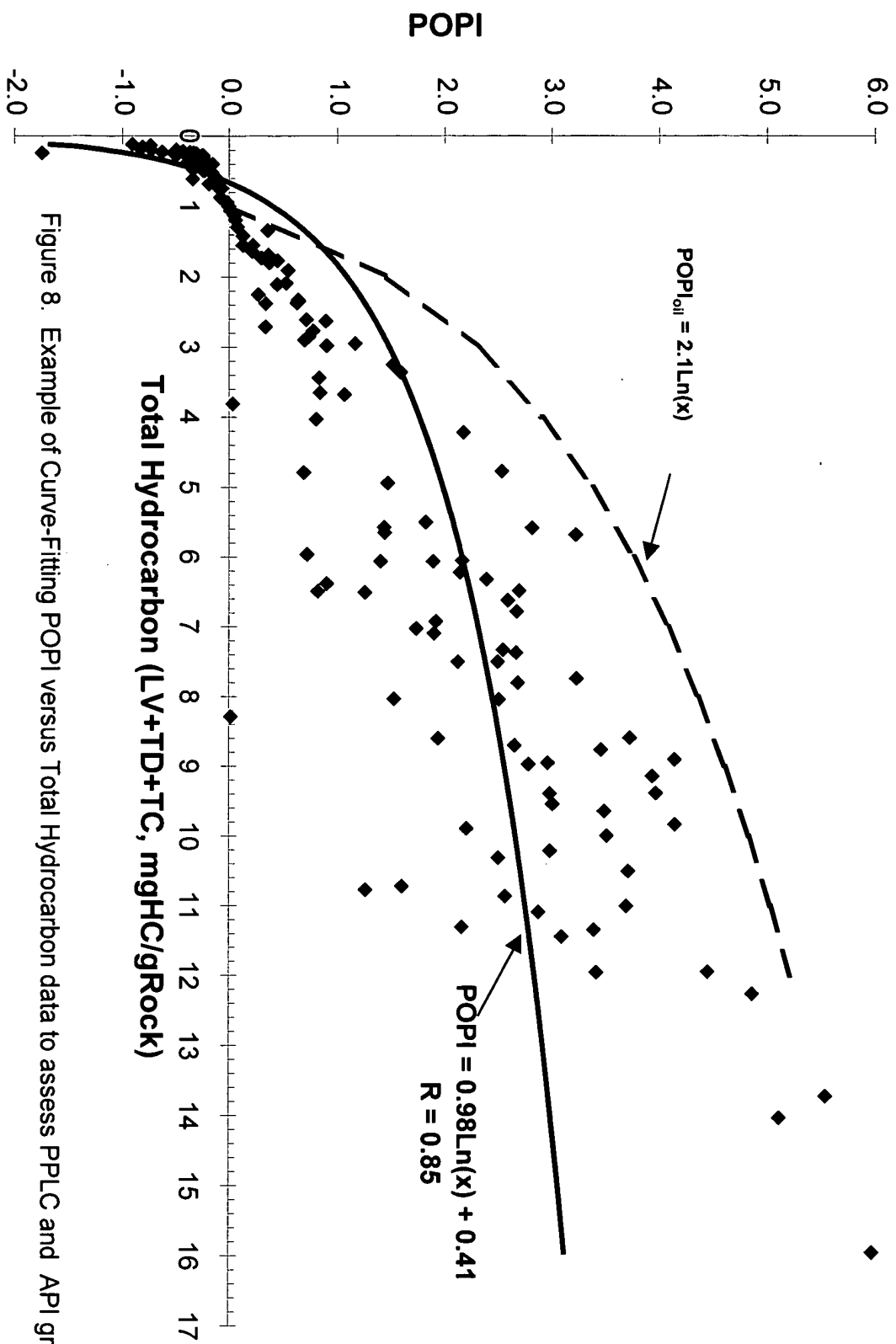


Figure 8. Example of Curve-Fitting POPI versus Total Hydrocarbon data to assess PPLC and API gravity.

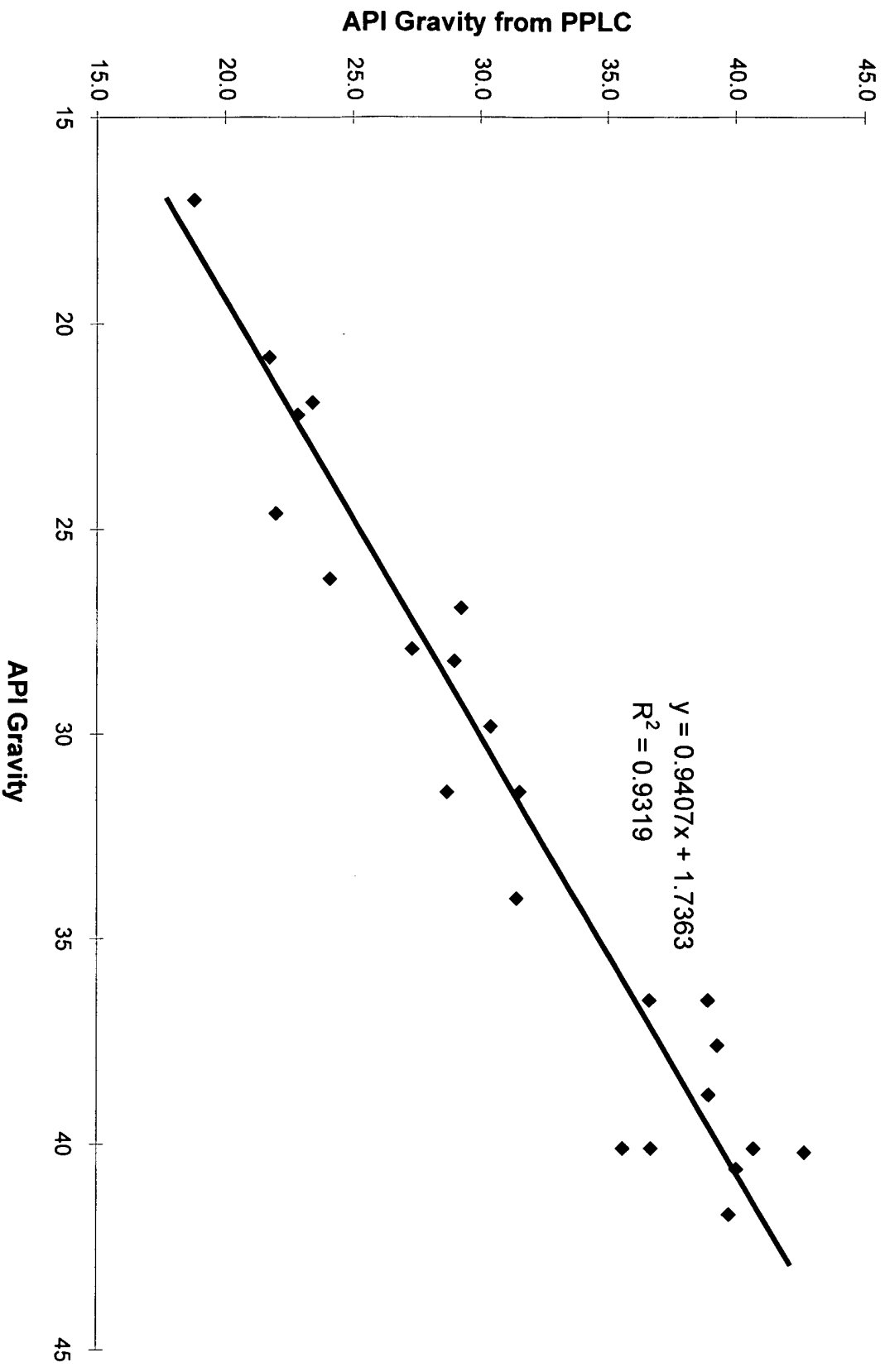
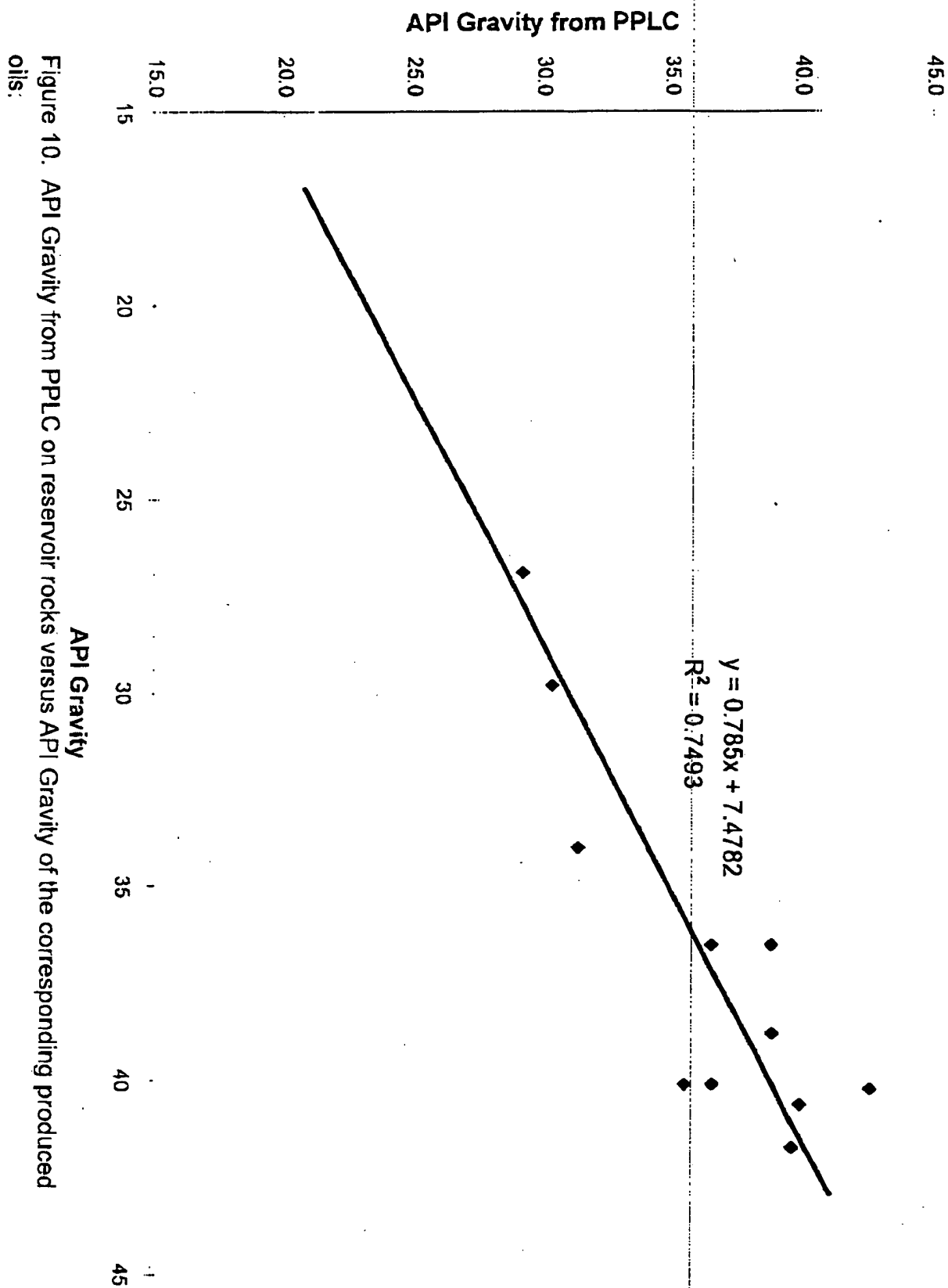


Figure 9. API Gravity computed from the PPLC of oils and reservoir rock samples versus the actual API Gravity values determined from the oil samples or from the produced oils from the respective wells with reservoir rock samples.

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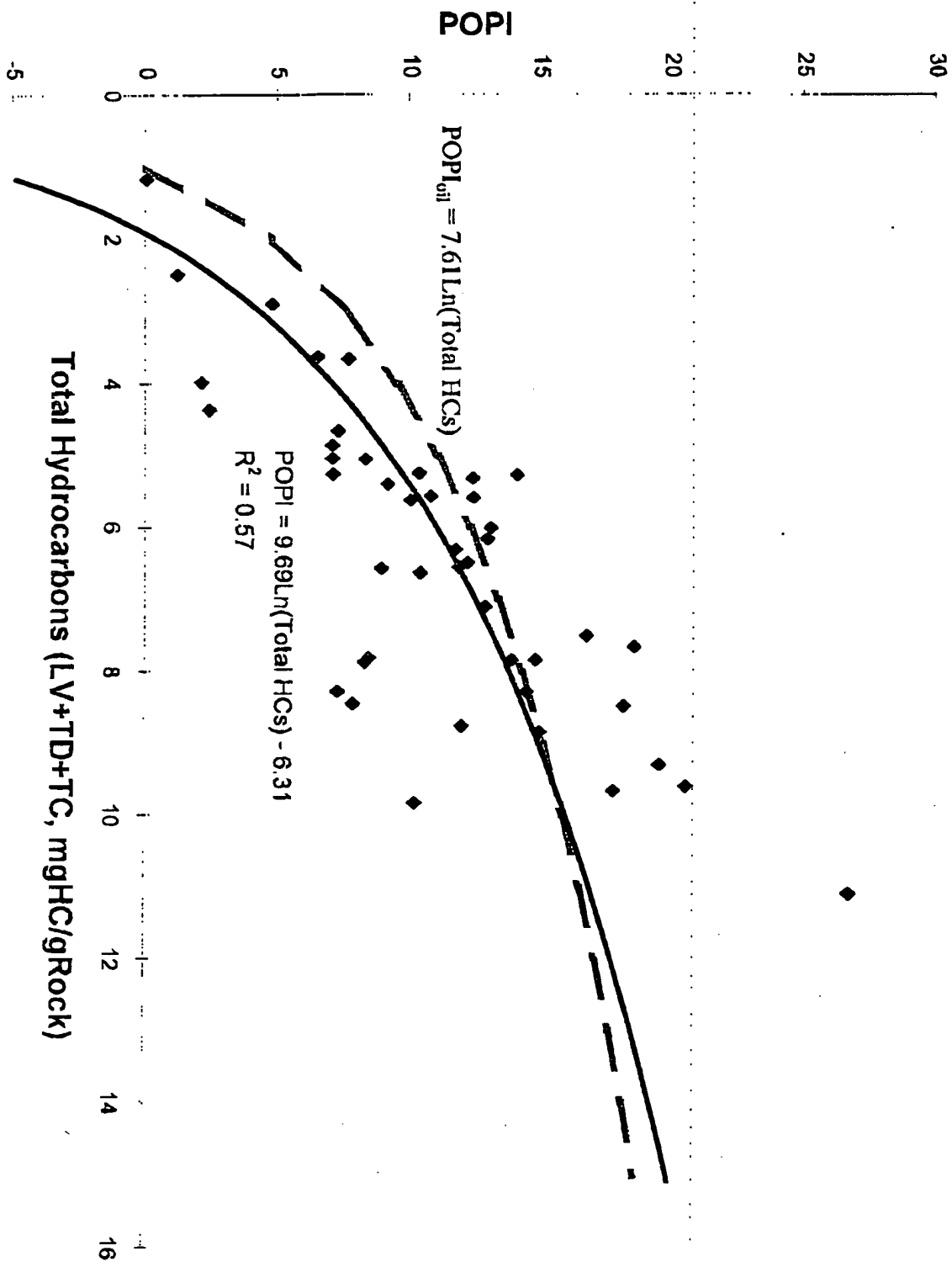


Figure 12. POP versus Total Hydrocarbons (LV+TD+TC) for a well with a lesser correlation

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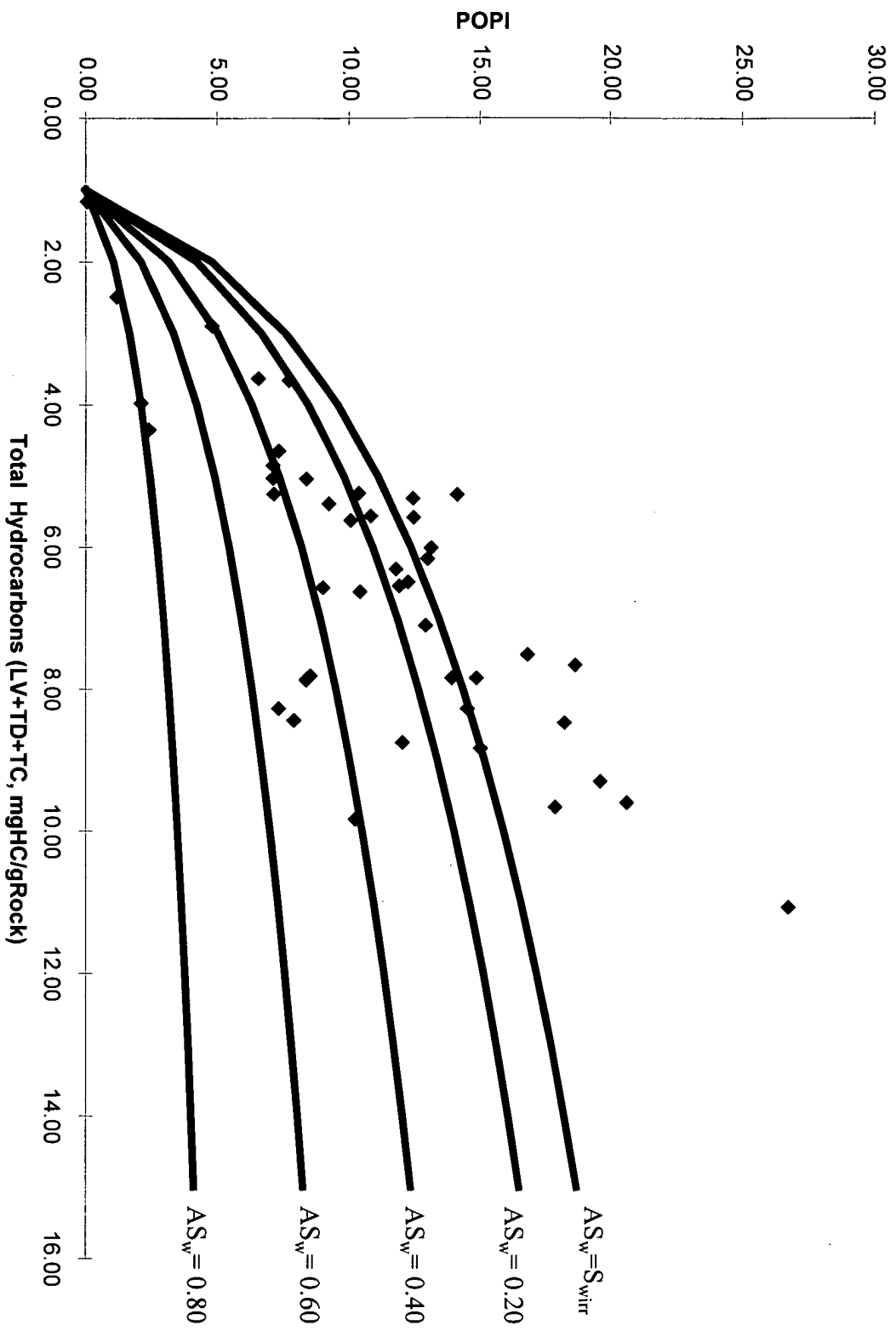


Figure 13. POPI versus Total Hydrocarbons (LV+TD+TC) with iso-ASW lines separating fields where similar ASW values are obtained.

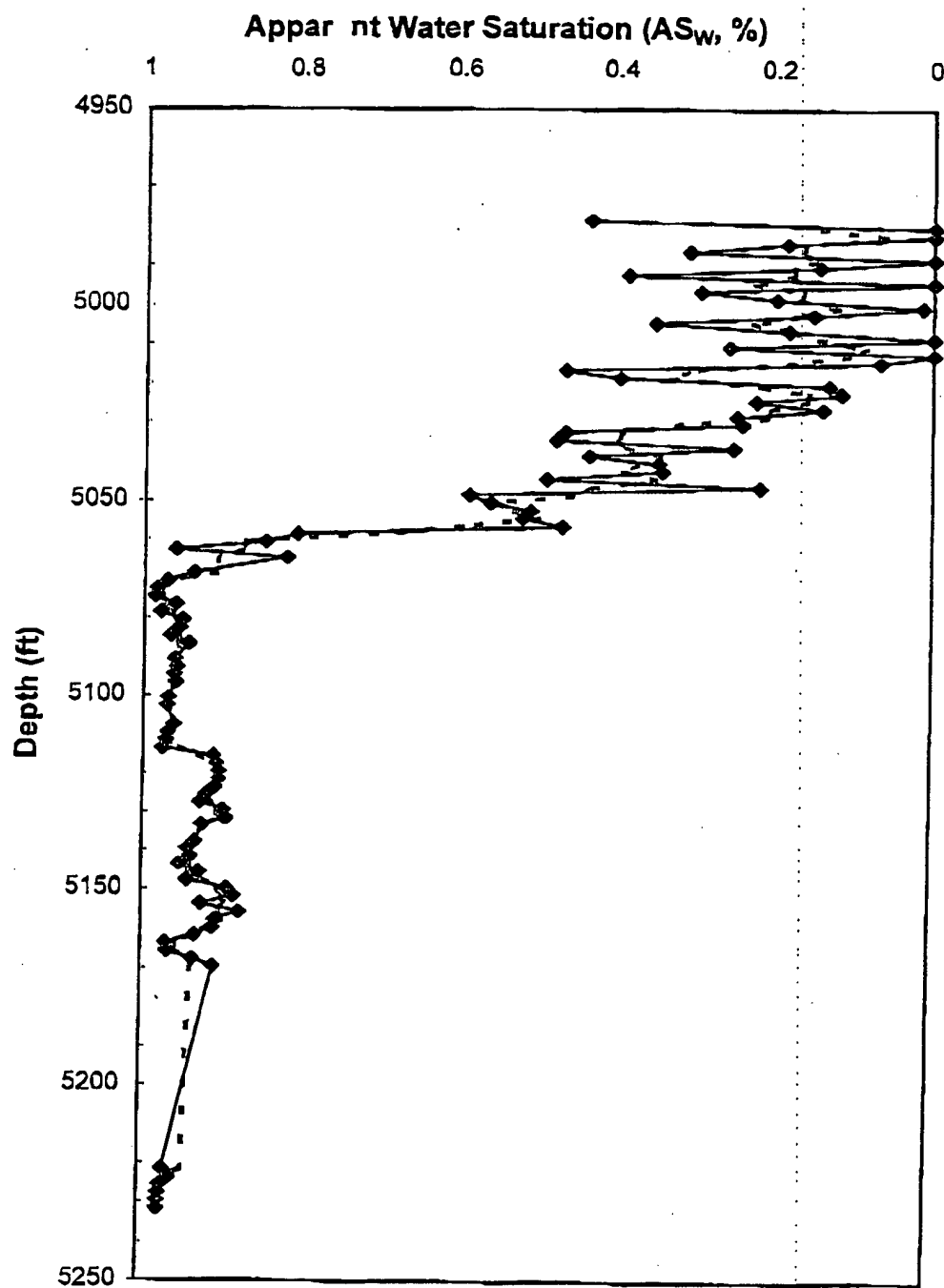


Figure 14. Depth versus Apparent Water Saturation (AS_w) with arithmetic smoothing applied to the dashed line.

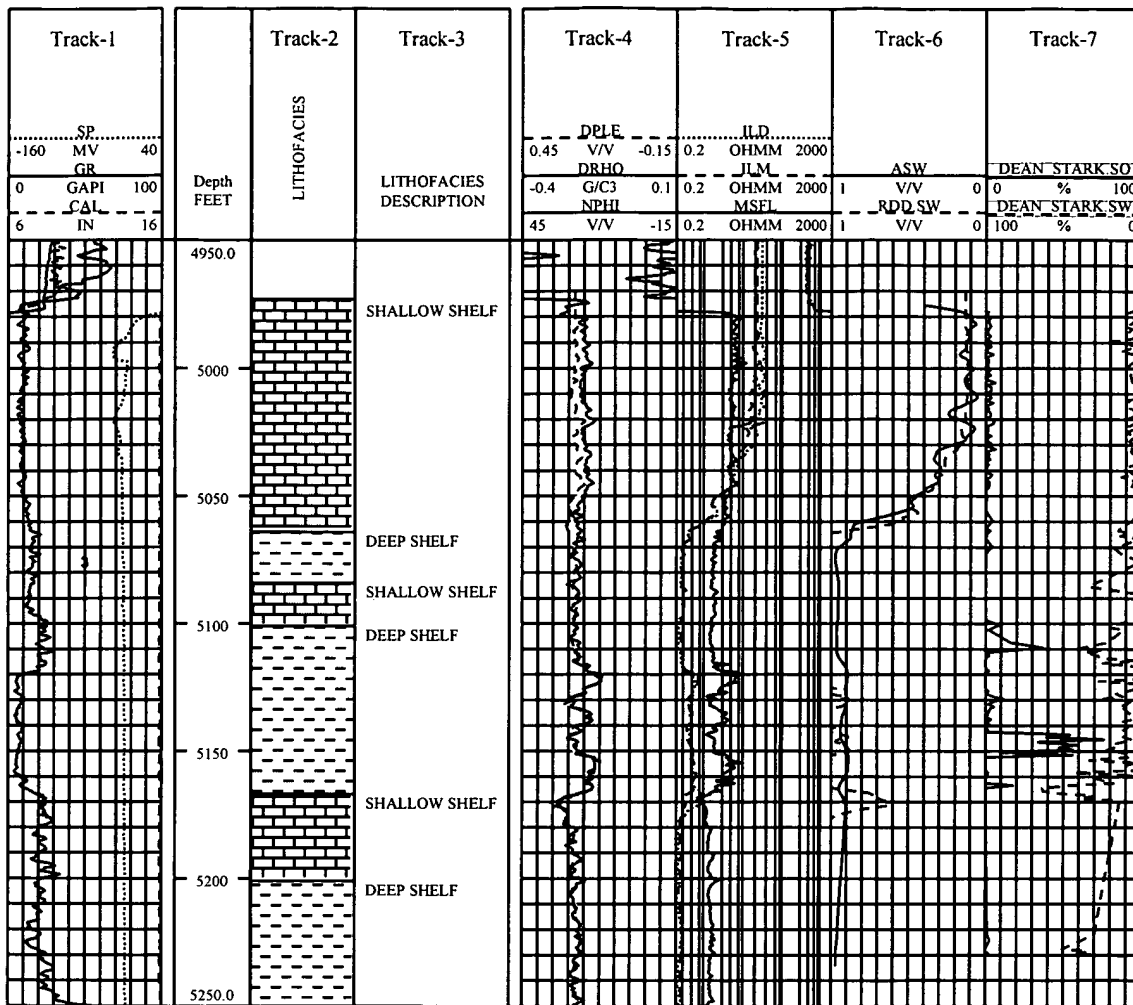


Figure 15. Composite log including typical electric log data, lithofacies descriptions, apparent water saturation(AS_w) from pyrolytic data, and Dean-Stark data.

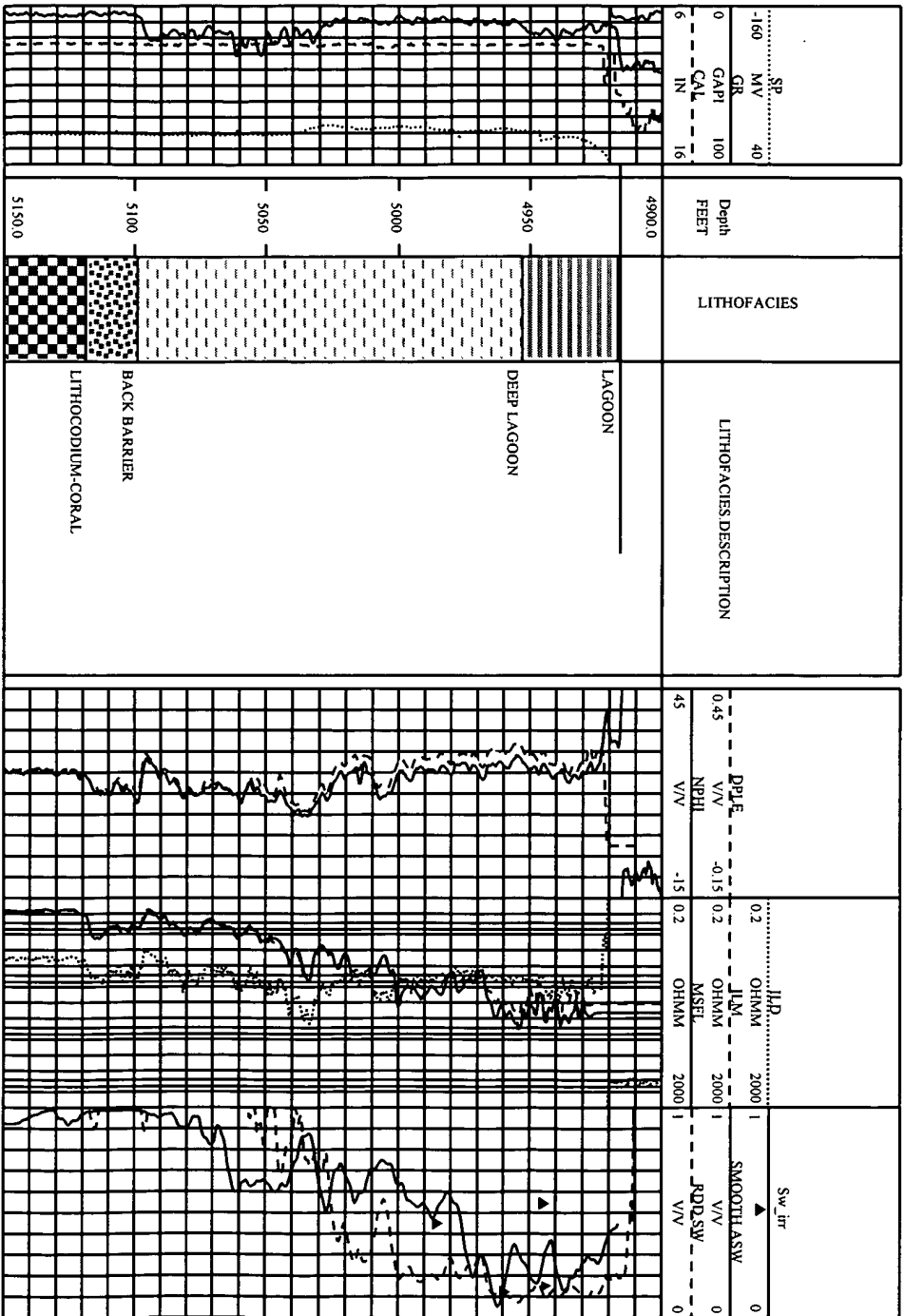


Figure 16. Composite well log including Lithofacies and Apparent Water Saturation (AS_w) as calculated from pyrolytic data.

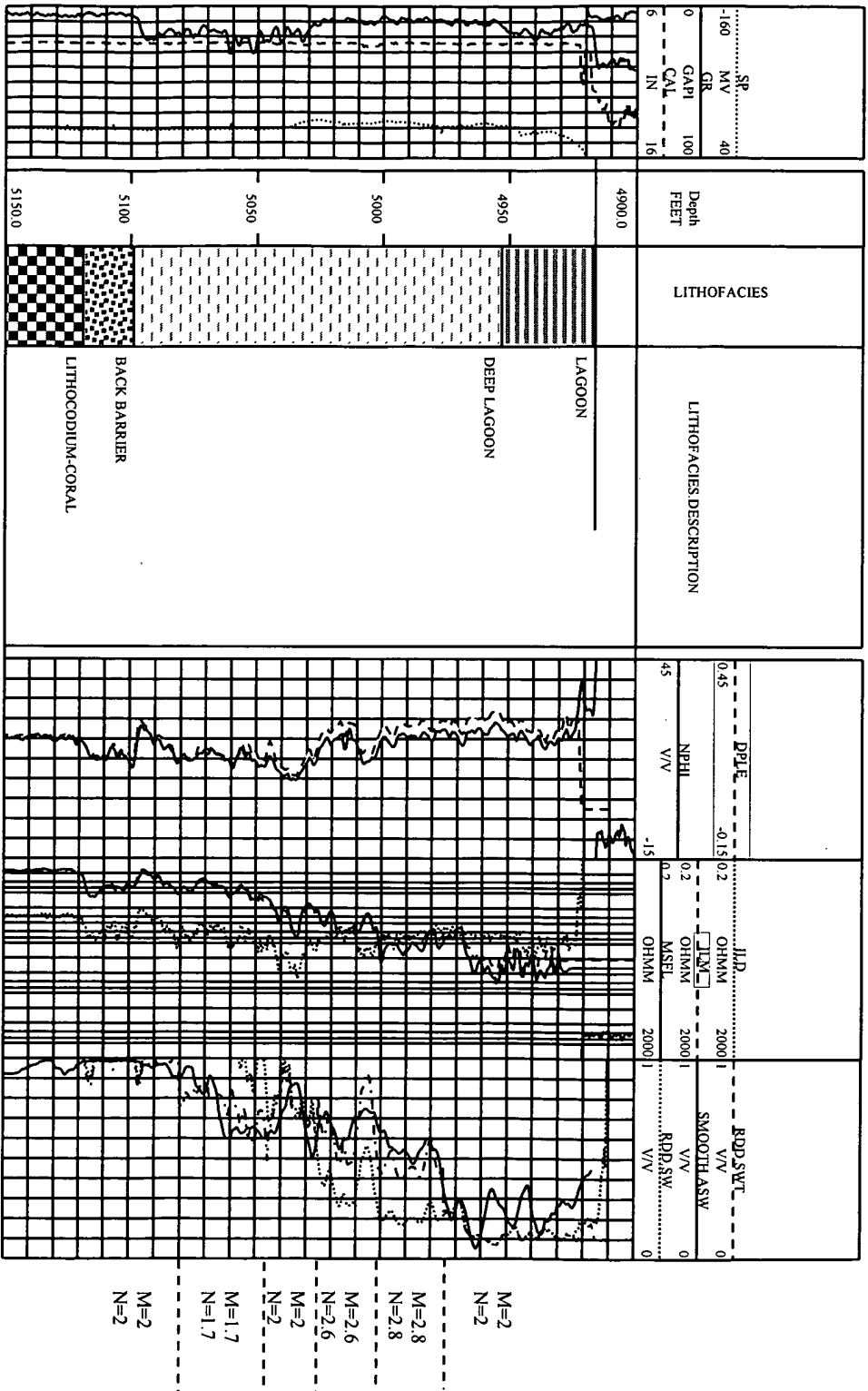


Figure 17. Composite well log including Lithofacies , Apparent Water Saturation (AS_w) as calculated from pyrolytic data, and recalculated water saturation using variable cementation (m) and saturation (n) exponent values as annotated.